

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2004/002651

A. CLASSIFICATION OF SUBJECT MATTER

IPC7 F41H 11/16

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 F41H11/16, 11/08, 11/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
KR, JP : IPC as aboveElectronic data base consulted during the international search (name of data base and, where practicable, search terms used)
mine, clean, vehicle, car, cut, explod, sensor, saw, link, hydraulic

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|-----------------------|
| Y | JP 3016018 B (Amamiya kiyoshi) 24. December 1999 | 1. 4. 5. 6 |
| Y | JP 2002-51649 A (Hurukawa Kikaikinzoku Kabusikikaisya) 19. February 2002 | 1 |
| Y | JP 1999-270997 A (Kabusikikaisya Komachu Seisakusyo) 5. October 1999 | 4 |
| Y | JP 2001-296100 A (Hurukawa Kikaikinzoku Kabusikikaisya) 26. October 2001 | 5 |
| Y | US 5,988,037 A (Kjell Jann Haugom) 23. November 1999 | 6 |

 Further documents are listed in the continuation of Box C. See patent family annex.

- * Special categories of cited documents:
- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search
31 JANUARY 2005 (31.01.2005)

Date of mailing of the international search report

31 JANUARY 2005 (31.01.2005)

Name and mailing address of the ISA/KR

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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT/KR2004/002651

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|--|------------------|--|--|
| JP 3016018 B | 24-12-1999 | NONE | |
| JP 2002-51649 A | 19-02-2002 | NONE | |
| JP 11-270997 A | 05-10-1999 | NONE | |
| JP 2001-296100 A | 26-10-2001 | NONE | |
| US 5,988,037 A | 23-11-1999 | AU 1963895 A1 DE 69519923 C0 DE 69519923 T2 EP 749562 B1 EP 749562 A1 WO 9524604 A1 | 25-09-1995 22-02-2001 13-06-2001 17-01-2001 27-12-1996 14-09-1995 |